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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/694,044	10/28/2003	Mu-Hyun Kim	1514.1034	3882

49455 7590 04/12/2006

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EXAMINER

GARRETT, DAWN L

ART UNIT	PAPER NUMBER
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1774

DATE MAILED: 04/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/694,044

Applicant(s)

KIM ET AL.

Examiner

Dawn Garrett

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 February 2006.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5-24 and 26-29 is/are pending in the application.
4a) Of the above claim(s) 12-23, 28 and 29 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-3, 5-11, 24, 26 and 27 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 28 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

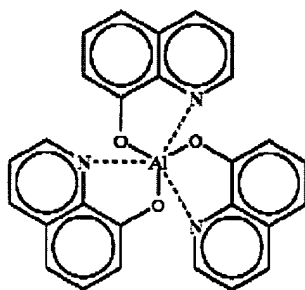
- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

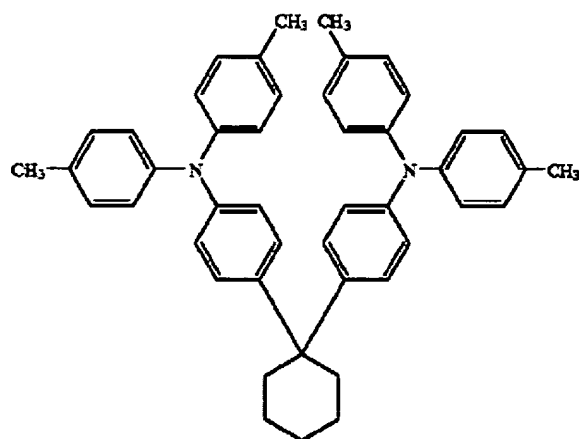
1. This Office action is responsive to the amendment received February 3, 2006. Claims 1, 3, and 5-8 are amended. Claims 4 and 25 have been canceled. Claims 12-23, 28 and 29 are currently withdrawn. Since claim 27 was previously omitted from consideration with the product claims, this Office action is non-final. Claims 1-3, 5-11, 24, 26 and 27 are under consideration. As stated in the last Office action, the species under consideration are the following:

Formula I for the low molecular weight organic electroluminescent material (shown in claim 3)



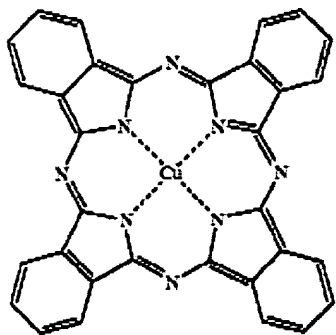
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Formula 14 for the hole transmitting layer material (shown in claim 5)



;

Formula 19 for the hole injecting material (shown in claim 6)



;

1, 3,4 -oxadiazole derivative for the electron injecting layer material (shown in claim 7);
and TAZ for the hole blocking material (claim 8).

2. The objections of claims 1 and 3 are withdrawn.

3. The rejections of claims 5, 7, and 8 under 35 USC 112, second paragraph, set forth in the Office action mailed October 13, 2006 are withdrawn.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claim 5 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 5 now recites the donor film “further includes a hole transmitting layer”. It is not seen where the specification describes a device having both a hole transporting layer and a hole transmitting layer. It appears that applicant uses the terms “hole transporting” and “hole transmitting” synonymously in the description and that they do not constitute two different materials or two different functions. It is suggested that “further includes” be deleted and that either the term “hole transporting” or the term “hole transmitting” be used consistently throughout all of the claims for clarity.

Claim Rejections - 35 USC § 102/103

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
7. Claims 1-3, 5, 7-11, 24, and 26 are again rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Kwon et al. (EP 0 851 714). Kwon et al. disclose a donor film for an organic electroluminescence device comprising a base

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film (substrate film) , a light-absorbing layer (photothermal conversion layer) and a transfer layer formed of a luminous material (see abstract). All of the adhesion properties set forth in claim 1 are considered to be inherent to the donor film. One purpose of a donor film is to adhere better to the substrate onto which it is transferred as compared to the substrate it is leaving. The process limitations in claim 1 are not significant, because the product, a donor film, is being claimed. Kwon et al. discloses formula (1) for the transfer layer, which is identical to formula 1 of claim 3 with regard to the low molecular weight organic electroluminescent material (see page 4, lines 21-35). The transfer layer may further comprise hole transfer material and electron transfer material per claim 4 (see abstract). The hole transfer material may include formula (8), which is identical to Formula 14 of claim 5 (see page 6, lines 25-43). Kwon et al. further discloses 1, 3, 4-oxadiazole derivative as an electron transfer material per claim 7 (see page 6, lines 20-24). In addition, Kwon et al. discloses TAZ per claim 8 (see page 6, lines 20-24). The light absorbing layer (photothermal layer) is comprised of polymer containing carbon black, graphite or infrared absorbing dye (see page 4, lines 8-10) per claims 9 and 10. The base film (substrate film) is comprised of any transparent polymer including polyesters (see col. 4, lines 4-7). Kwon et al. further discloses a gas generating layer (see claim 15, page 18) with regard to claim 26. Kwon et al. is deemed to be sufficient to anticipate the claims; however, in the alternative that Kwon et al. is not considered to be sufficient to anticipate these claims and their recited properties, it would have been obvious to one of ordinary skill in the art at the time of the invention to have formed a device comprising all the recited components, because Kwon et al. teaches all the materials to form such a device.

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8. Claims 1-3, 6-9, 11, and 24 are again rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Akai (US 2003/0045021). Akai discloses transfer donor films for organic electroluminescent devices (see abstract and par. 82).

The donor film comprises a base film formed of a polymer such as PET (see par 84) and an organic film (see par. 87). The organic film (transfer layer) comprises multiple layers (see par. 87-89). One of those layers of the organic film may be a light emitting layer comprising Alq3 per Formula 1 of claim 3 (see par. 93). A further layer may comprise the following materials: CuPc (per claim 6), oxadiazole compounds (per claim 7), and triazole derivatives (per claim 8) (see par. 95 and 96). A light to heat conversion layer is formed on the base film per the photothermal film (see par. 86). Akai is deemed to be sufficient to anticipate the claims; however, in the alternative that Akai is not considered to be sufficient to anticipate these claims and their recited properties, it would have been obvious to one of ordinary skill in the art at the time of the invention to have formed a device comprising all the recited components, because Akai teaches all the materials to form such a device.

9. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kwon et al. (EP 0 851 714) in view of Fujita et al. (US 2003/0008224). Kwon et al. is relied upon as set forth above. Kwon et al. discloses a gas generating layer (see claim 15, page 18) with regard to claim 26, but fails to set forth the specific gas-generating compounds of claim 27. Fujita et al. teaches in analogous art an exemplary gas-generating layer comprising either PETN or TNT (see par. 59). It would have been obvious to one of ordinary skill in the art at the time of the invention to have selected either PETN or TNT as a gas-generating material of the gas-producing layer of the

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donor film taught by Kwon, because Fujita et al. teach PETN or TNT as gas-generating material in the art.

Response to Arguments

10. Applicant's arguments filed February 3, 2006 have been fully considered but they are not persuasive.

Applicant argues with regard to independent claim 1 that neither Kwon nor Akai “teach or suggest the hole blocking layer in amended independent claim 1”. The examiner submits independent claim 1 does not require a hole blocking layer as written. The hole blocking layer is part of a Markush group and the claim only requires that “at least one” of the group is present. Additionally, the argument is not persuasive because Kwon teaches the hole blocking material of claim 8, TAZ₂ (see page 6, lines 20-24) and Akai teaches triazole derivatives (see par. 95 and 96).

Applicant argues with regard to independent claim 24 that neither Kwon nor Akai teach the methods of the claims. Claim 24 is a product-by-process type claim. See MPEP 2113. Kwon and Akai teach the final product limitations of the device of claim 24.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dawn Garrett whose telephone number is (571) 272-1523. The examiner can normally be reached Monday through Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached at (571) 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Dawn Garrett
Primary Examiner
Art Unit 1774

D.G.
April 5, 2006